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STEREO CASSETTE MUSIC SYSTEM

MODEL AF-5600E,K

AIWA®

[SERVICE MANUAL]

Code No., 05-560-000-18

DATE OF ISSUE 11/1978

SPECIFICATIONS

Model type:	Stereo cassette music system
Semiconductors:	10 IC's, 1 FET, 78 transistors, 42 diodes, 12 LED's
Power supply:	AC 120V/220V switchable 50/60 Hz (E model) AC 120V/240V switchable 50 Hz (K model)
Power consumption:	250 W (4 ohms)
Dimensions:	606(W) x 211(H) x 460(D) mm (w/dust cover)
Weight:	19.5 kg (w/dust cover)
Accessories:	Indoor FM antenna 1 Head cleaning stick 1 Cassette tape 1 AM antenna 1

< Tuner Section >

Frequency range:	FM:	87.5 ~ 108 MHz (3.4 ~ 2.8 m)
	SW:	5.7 ~ 16.7 MHz (53 ~ 18 m)
	MW:	515 ~ 1650 kHz (582 ~ 182 m)
	LW:	145 ~ 350 kHz (2069 ~ 857 m)
Sensitivity: (IHF, THD 3% (S/N 20 dB)	FM:	6 ± 2 dB (at 88, 98, 108 MHz)
	SW:	27 ± 5 dB (at 6 MHz) 27 ± 3 dB (at 10, 16 MHz)
(S/N 20 dB)	MW:	50 ± 3 dB (at 600 kHz) 49 ± 3 dB (at 1000, 1400 kHz)
(S/N 20 dB)	LW:	62 ± 3 dB (at 150 kHz) 60 ± 3 dB (at 240, 340 kHz)
FM frequency response:		30 ~ 15,000 Hz
FM signal to noise ratio: (Weighted)		70 dB
FM distortion:		Less than 0.25 %
Muting level:		14 dB
Antennas:		FM: 300 ohms (balanced) 75 ohms (unbalanced) AM: Built-in antenna, terminal for external antenna

< FM Multiplex Section >

Separation:	More than 38 dB (1 kHz)
Distortion:	Less than 0.4 %

< Turntable Section >

Model type:	Direct drive full automatic turntable
Motor:	20 pole 30 slot DD motor
Speeds:	33-1/3 and 45 rpm
Signal to noise ratio: (Weighted, DIN B)	More than 60 dB
Wow and flutter:	Less than 0.09 % (DIN)
Cartridge type:	Moving magnet (MM)
Separation:	19 ± 3 dB (33-1/3 rpm, 1 kHz)
Tracking force:	2 ± 0.3 g

< Cassette Tape Deck Section >

Track format:	4 tracks 2 channel
Tape speed:	4.76 cm/sec ± 1.5%
Recording time:	60 minutes (C–60)
Recording system:	AC bias
Erasing system:	AC erase
Record bias frequency:	61 kHz
Frequency response:	Normal (LH) tape: 30 ~ 12,500 Hz Fe-Cr tape: 30 ~ 16,000 Hz CrO_2 tape: 30 ~ 16,000 Hz According to DIN 45500 Blatt 8 Normal (LH) tape: 30 ~ 12,500 Hz Fe-Cr tape: 30 ~ 15,000 Hz CrO_2 tape: 30 ~ 15,000 Hz
Signal to noise ratio:	According to DIN 45500 Blatt 8 60 dB (CrO_2 tape, DOLBY NR ON)
Erase ratio:	60 dB
Wow and Flutter:	Less than 0.07% (WRMS) According to DIN 45500 Blatt 8 Less than 0.18%
Pinch roller pressure:	275 ± 25 g
Take-up torque:	50 ± 10 g-cm
FF torque:	100 ± 10 g-cm
Rewind torque:	95^{+10}_{-5} g-cm
FF & rewind time:	80 ± 10 sec (C-60)

< Audio Section >

Circuitry:	Pure complementary SEPP OTL
Continuous output power: (20Hz ~ 20kHz/THD 1%)	25W + 25W (8 ohms) 30W + 30W (4 ohms)
(1kHz/THD 1%)	30W + 30W (8 ohms) 35W + 35W (4 ohms)
Music output power:	45W + 45W (8 ohms) 60W + 60W (4 ohms)
Loudness response: (With volume at –40 dB)	+7.0 ± 1.5 dB (at 100 Hz) +4.5 ± 1.0 dB (at 10 kHz)
Tone controls:	Bass: 100 Hz $^{+9}_{-8}$ dB TREBLE: 10 kHz ± 9 dB
Gain and input impedance:	MIC: 0.5 mV (200 ohms ~ 10 k-ohms) DIN IN: 150 mV (500 k-ohms) (TAPE PLAY)
Output level and impedance:	DIN OUT: 1 mV/k-ohm (TAPE REC) SPEAKERS: 4 ~ 16 ohms PHONES: 8 ohms

- Specifications and design are subject to change without notice due to product improvements.
- Dolby Noise Reduction Circuit under License from Dolby Laboratories Incorporated.
- The word "Dolby" and "Double-D" symbol are trademarks of Dolby Laboratories Incorporated.

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DISASSEMBLY INSTRUCTIONS

1. To Remove Wooden Cover

1) Remove 6 screws.
(Refer to Fig. 1)

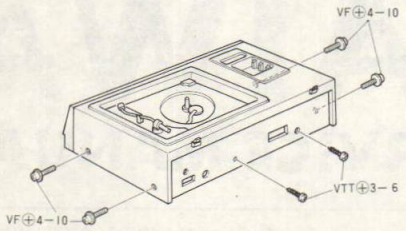

Fig. 1

2. To Remove Turntable

1) Remove the platter
2) Loosen 2 turntable frame securing screws and slide in directions shown by arrows.
(Refer to Fig. 2)
3) Disconnect 2 turntable connectors.

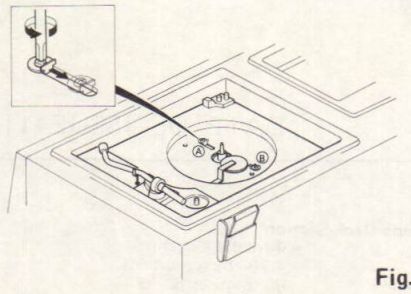

Fig. 2

3. To Remove Front Sash

1) Pull out the control knobs.
2) Remove 8 screws.
(Refer to Fig. 3)

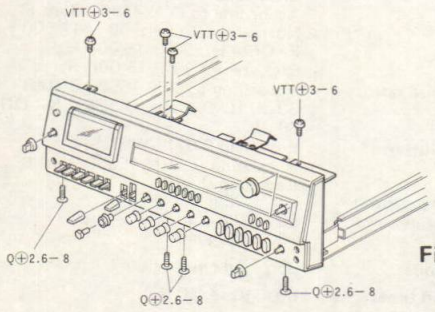

Fig. 3

4. To Remove Holder

1) Remove 4 screws.
(Refer to Fig. 4)

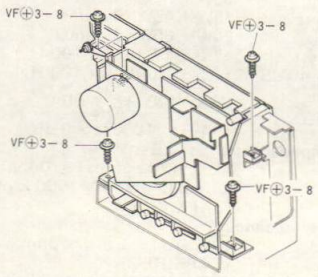

Fig. 4

5. To Remove Mechanical Unit

1) Remove the counter belt.
2) Remove 5 push-button springs.
3) Remove 3 screws.
(Refer to Fig. 5)

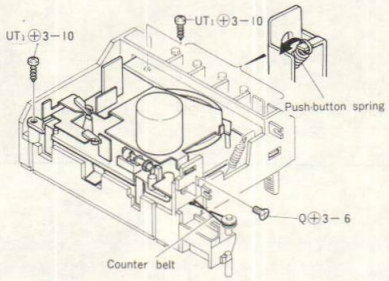

Fig. 5

6. To Remove Rec./Pb Circuit Board

1) Remove the spring.
2) Remove 4 screws.
(Refer to Fig. 6)

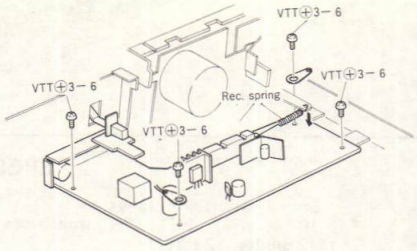

Fig. 6

7. Remove Tuner Circuit Board

1) Remove 6 screws.
(Refer to Fig. 7)

Note: In order to prevent the dial cord from slipping off the dial drum when removing the tuner circuit board, loosen setscrew and as shown in the figure, set dial drum on raised tab of chassis.
(Refer to Fig. 8)

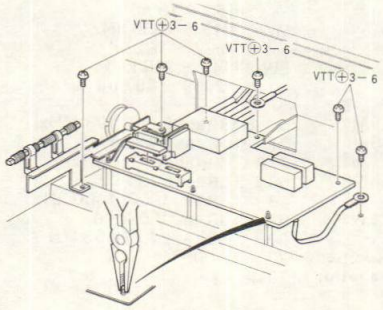

Fig. 7

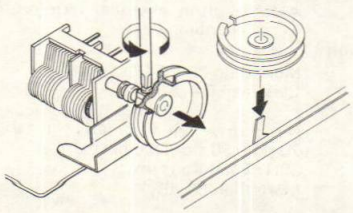

Fig. 8

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8. To Remove Amp. Circuit Board

1) Remove 6 Stoppers, and pull out rods.
2) Loosen 4 volume shaft securing screws and pull out volume shafts.
3) Remove 5 screws and 2 nylon rivet.
(Refer to Fig. 9)

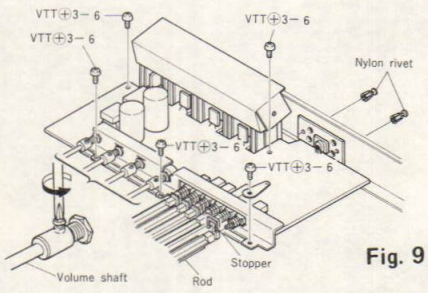


Fig. 9

9. To Remove FM Preset Circuit Board

1) Remove 3 screws.
(Refer to Fig. 10)

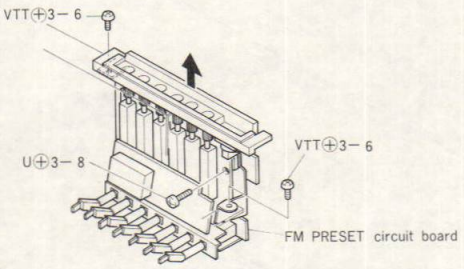
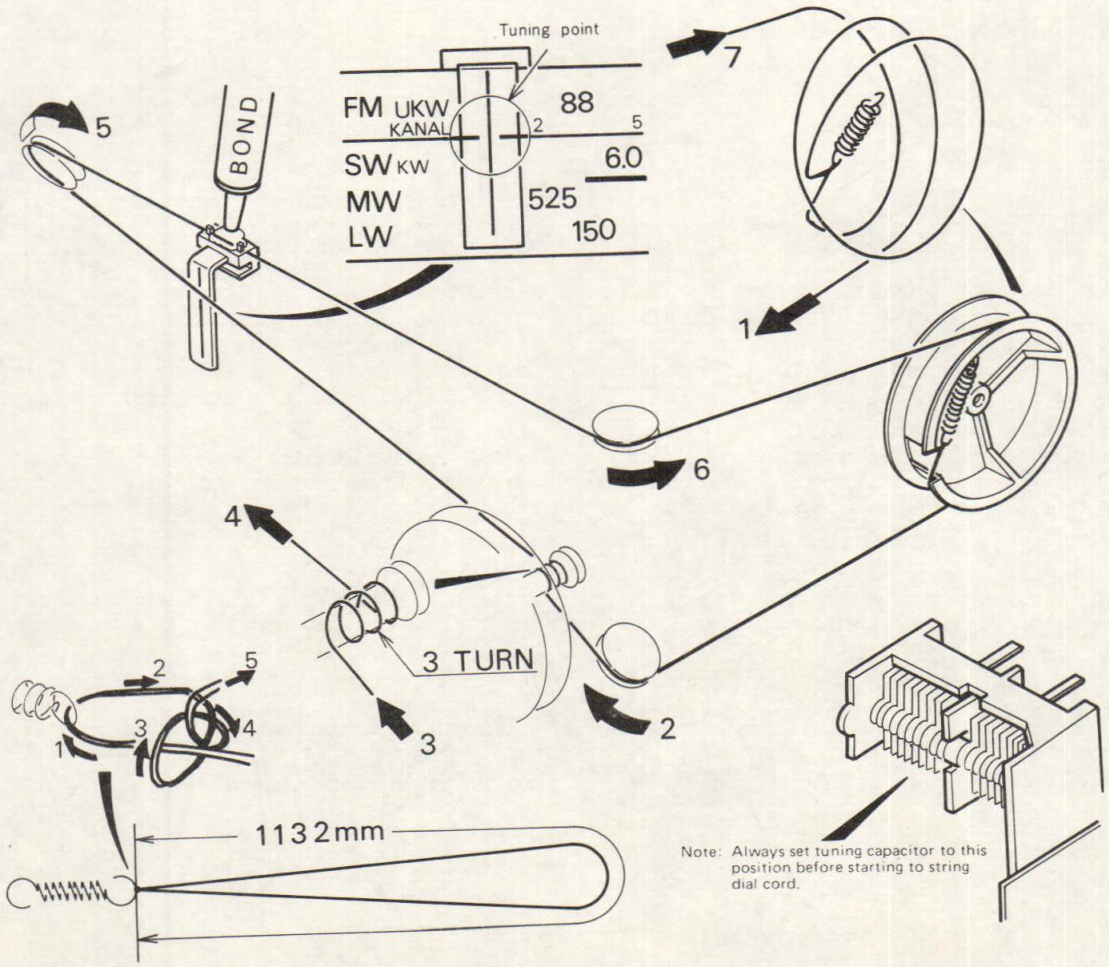


Fig. 10

DIALCORD STRINGING



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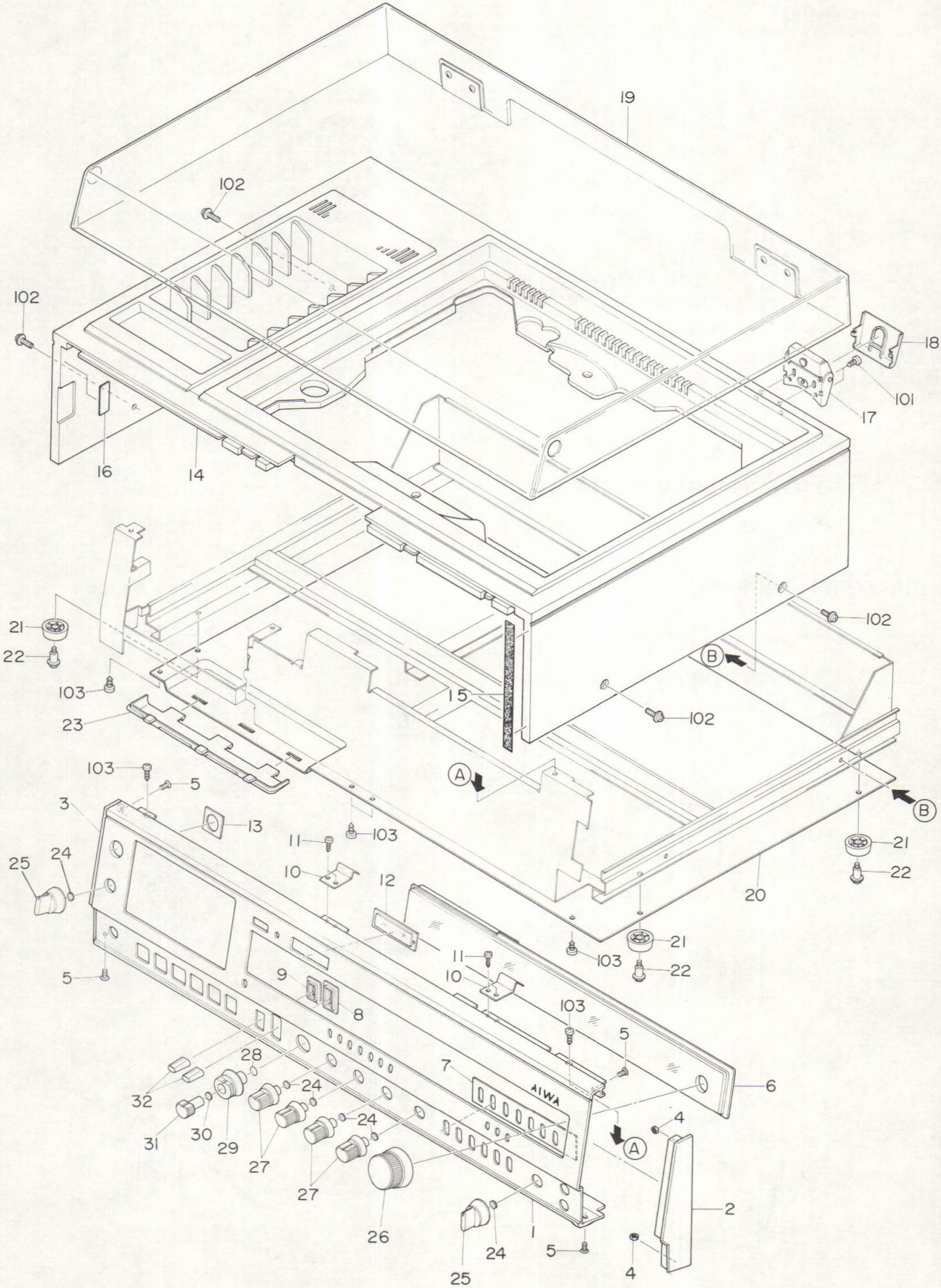
EXPLODED VIEW-1



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MECHANICAL PARTS

PARTS LIST

■ * mark in this part list shows exclusive part (which is used) for only Model AF-5600.

Ref. No.	Part No.	Part No. Changed to	Description	Common Model	Q'ty
1~13	09-047-122-01		Panel assembly		
1-1	82-494-001-01		Front panel	*	1
1-2	82-494-039-01		Side panel L	*	1
1-3	82-494-038-01		Side panel R	*	1
1-4	87-391-713-01		N-2.6		4
1-5	87-231-074-01		Q + 2.6-8		4
1-6	82-494-003-01		Window, Tuning	*	1
1-7	82-481-332-01		Guide, Button		1
1-8	82-494-041-01		Cover B, Switch	*	1
1-9	82-494-040-01		Cover A, Switch	*	1
1-10	82-494-278-01		Holder, Wooden cabinet	*	2
1-11	87-081-511-01		VTT + 3-6		4
1-12	82-494-062-01		Window	*	1
1-13	82-494-035-01		Guide, AC switch button	*	1
1-14	82-494-008-01		Wooden cabinet assembly	*	1
1-15	82-474-306-01		Himeron cloth A	*	1
1-16	82-299-032-01		Name plate		1
1-17	87-064-074-01		Hinge ass'y		2
1-18	87-064-092-01		Cover, Hinge		2
1-19	82-494-013-01		Dust cover ass'y	*	1
1-20	82-494-016-01		Cabinet, Bottom	*	1
1-21	87-085-161-01		Foot		5
1-22	82-304-276-01		Screw, Foot		5
1-23	82-494-045-01		Bottom case	*	1
1-24	82-494-310-01		Cushion	*	6
1-25	82-494-030-01		Knob, Speaker selector	*	2
1-26	82-494-031-01		Knob, Tuning	*	1
1-27	82-494-027-01		Knob, Volume	*	4
1-28	82-494-311-01		Spacer, REC	*	1
1-29	82-494-028-01		Knob A, REC	*	1
1-30	82-494-315-01		Felt, 6-10-1	*	1
1-31	82-494-029-01		Knob B, REC	*	1
1-32	82-485-020-01		Lever-key	AF-5090	2

Ref. No.	Part No.	Description	Q'ty
1-101	87-341-095-21	UT_1 + 3-8	8
1-102	87-500-171-11	VF + 4-10	4

Ref. No.	Part No.	Description	Q'ty
1-103	87-081-511-01	VTT + 3-6	7

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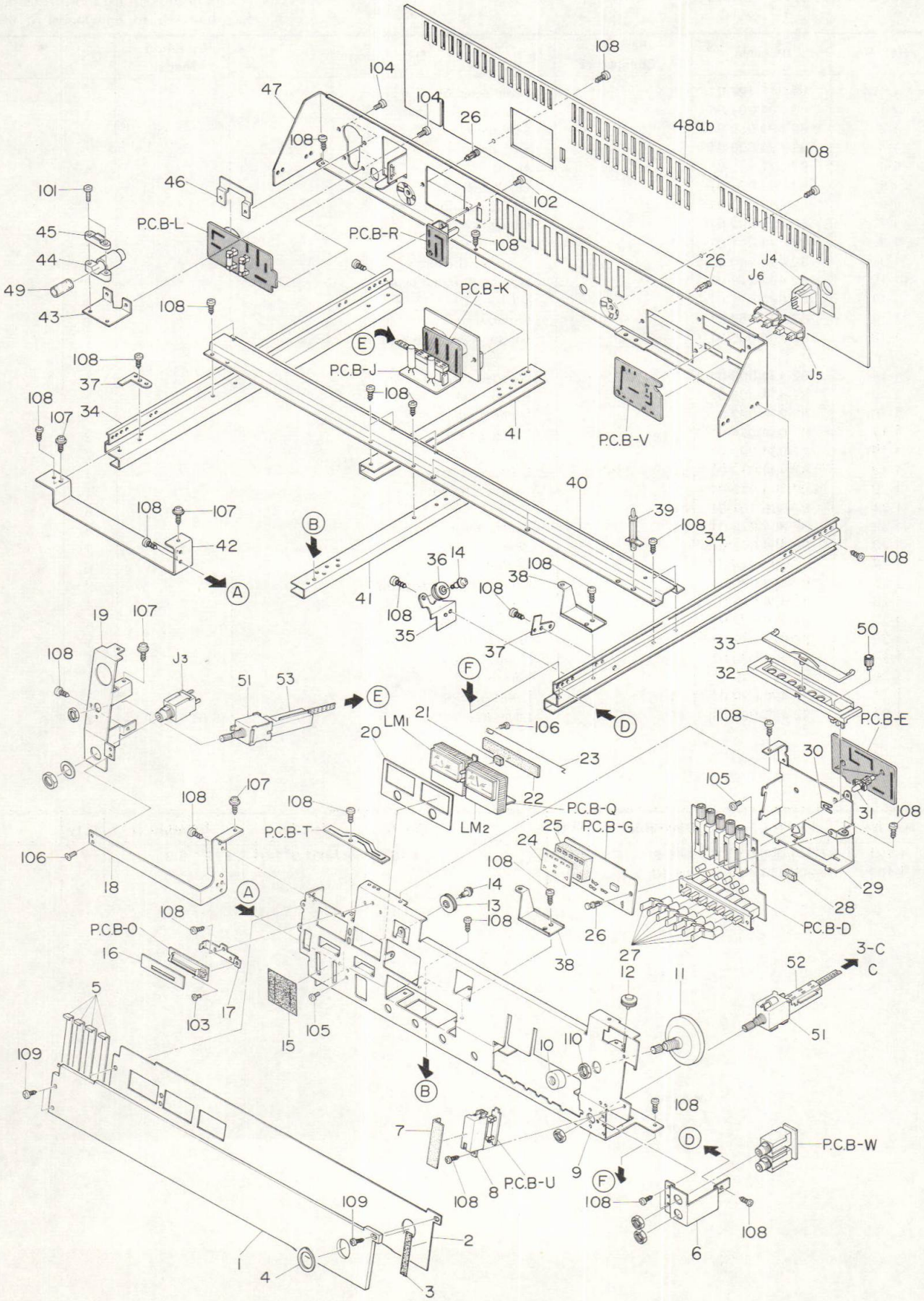
EXPLODED VIEW–2



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Ref. No.	Part No.	Part No. Changed to	Description	Common Model	Q'ty
2-1	82-494-018-01		Dial plate	*	1
2-2	82-494-019-01		Dial plate, Back	*	1
2-3	82-494-307-01		Himeron cloth B	*	1
2-4	82-494-299-01		Plate	*	1
2-5	82-494-287-01		Clamp, Dial plate	*	4
2-6	82-494-208-01		Holder, Jack	*	1
2-7	82-494-308-01		Cover, Sheet	*	1
2-8	82-488-203-01		Holder, Pilot lamp		1
2-9	82-494-201-01		Chassis A, Front	*	1
2-10	82-470-245-01		Collar, Tuning	AF-3030	1
2-11	82-494-218-01		Tuning shaft ass'y	*	1
2-12	87-071-020-01		Roller, 12ϕ		1
2-13	82-470-276-01		Roller, 14ϕ	AF-3030	1
2-14	87-081-483-01		Motor screw, M2.6		2
2-15	82-494-293-01		Himeron cloth, SW	*	1
2-16	82-494-058-01		Plate	*	1
2-17	82-494-281-01		Holder	*	1
2-18	82-494-265-01		Angle D	*	1
2-19	82-494-264-01		Front chassis B	*	1
2-20	82-494-285-01		Meter bearing	*	1
2-21	82-494-294-01		Cushion A	*	1
2-22	82-494-301-01		Cushion, 5-12-70	*	1
2-23	82-494-270-01		Spring, Meter holder	*	1
2-24	82-494-044-01		Indicator plate	*	1
2-25	82-494-272-01		Indicator holder	*	1
2-26	87-084-063-01		Nylon rivet 3-5.5		5
2-27	82-494-026-01		Push-button,	*	7
2-28	82-494-309-01		Cushion, 5-5-15	*	1
2-29	82-494-214-01		Holder, Pre-set	*	1
2-30	82-385-383-01		Stopper, Rod	AD-6300	1
2-31	87-064-061-01		Holder, Circuit board		2
2-32	82-494-011-01		Box, Pre-set	*	1
2-33	82-494-012-01		Lid, Pre-set	*	1
2-34	82-494-204-01		Angle B	*	2
2-35	82-494-222-01		Holder A, Tuning	*	1
2-36	82-473-220-01		Roller 11ϕ	AX-7500	1
2-37	82-494-277-01		Rest, Drum	*	2
2-38	82-494-213-01		Holder, Circuit board	*	2
2-39	87-064-087-01		Holder, Printed circuit board		3
2-40	82-494-203-01		Angle A	*	1
2-41	82-494-205-01		Angle C	*	2
2-42	82-494-207-01		Holder, Bottom	*	1
2-43	82-473-257-01		Holder, AC power cord	AX-7500	1
2-44	87-085-095-01		Holder B, AC power cord		1
2-45	87-085-099-01		Holder A, AC power cord		1
2-46	82-488-234-01		Holder, Voltage selector		1
2-47	82-494-206-01		Back chassis	*	1
2-48a	82-494-017-01		Back board (E model only)	*	1
2-48b	82-494-016-01		Back board (K model only)	*	1
2-49	87-830-603-01		UL tube 6ϕ-30		1
2-50	82-494-047-01		Knob B, Pre-set	*	1
2-51	87-031-481-01		Remote switch		2
2-52	87-034-092-01		Wire, Remort switch		1
2-53	82-494-665-01		Wire, Remort switch	*	1

Ref. No.	Part No.	Description	Q'ty
2-101	87-261-099-21	V + 3-15	2
2-102	87-251-071-21	U + 2.6-4	2
2-103	87-251-073-21	U + 2.6-6	1
2-104	87-253-094-21	U + 3-6	5
2-105	87-251-095-21	U + 3-8	2

Ref. No.	Part No.	Description	Q'ty
2-106	87-231-094-21	Q + 3-6	1
2-107	87-500-095-11	VF + 3-8	4
2-108	87-081-511-01	VTT + 3-6	39
2-109	87-081-512-01	VTT + 3-8	3
2-110	87-081-253-11	N-9	1

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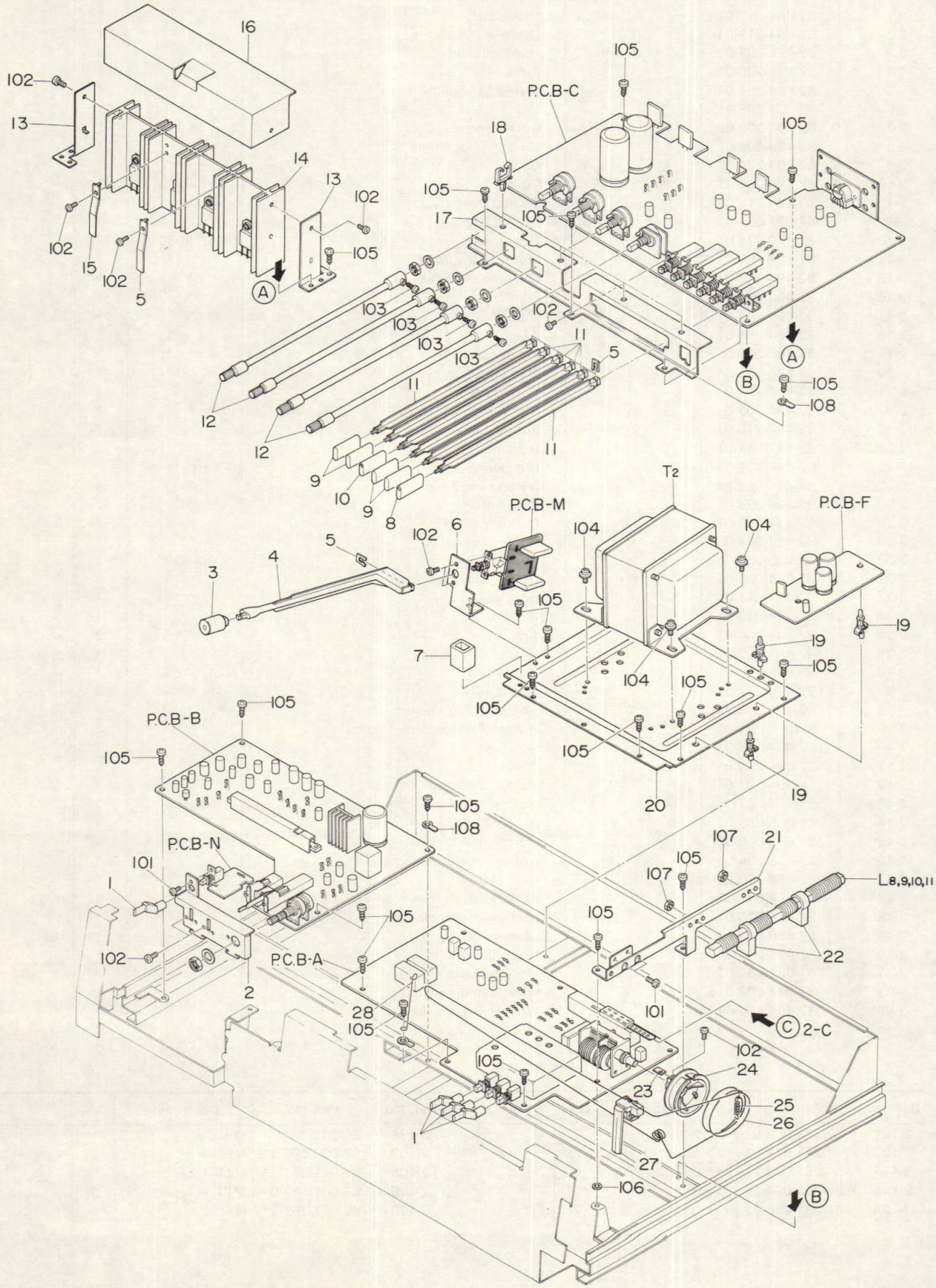
EXPLODED VIEW–3



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Ref. No.	Part No.	Part No. Changed to	Description	Common Model	Q'ty
3-1	82-494-026-01		Push-button,	*	4
3-2	82-494-273-01		Holder, REC	*	1
3-3	82-399-025-01		AC switch button ass'y	AD-6400	1
3-4	82-397-292-01		Shaft, Selector	AD-6550	1
3-5	82-385-383-01		Stopper, Rod	AD-6300	7
3-6	82-494-212-01		Holder, Power switch	*	1
3-7	82-494-303-01		Spacer	*	1
3-8	82-481-029-01		Push-button, Green	AF-3090	1
3-9	82-481-028-01		Push-button	AF-3090	4
3-10	82-481-031-01		Push-button, Orang	AF-3090	1
3-11	82-385-382-01		Rod, P	AD-6300	6
3-12	82-494-215-01		Shaft, Volume	*	4
3-13	82-494-211-01		Holder, Insulation plate	*	2
3-14	82-494-627-01		Heatsink	*	1
3-15	82-494-289-01		Holder, Diode	*	2
3-16	82-494-291-01		Cover, Insulation plate	*	1
3-17	82-494-210-01		Holder, Volume	*	1
3-18	87-064-038-01		Wire clip A		4
3-19	87-064-061-01		Holder B, Printed circuit board		3
3-20	82-494-209-01		Holder, Power transformer	*	1
3-21	82-494-288-01		Holder, VC	*	1
3-22	82-428-276-01		Holder, Antenna		2
3-23	82-461-378-01		Leaf nut	TPR-930	1
3-24	82-470-240-01		Dial drum	AF-3030	1
3-25	82-439-359-01		Drum spring	TPR-300	1
3-26	87-096-086-01		Dial string 0.4ϕ		1
3-27	82-494-021-01		Tuning pointer	*	1
3-28	82-471-212-01		Guide, Dial wire	AF-5080	1

Ref. No.	Part No.	Description	Q'ty
3-101	87-251-071-21	U + 2.6-4	3
3-102	87-251-094-21	U + 3-6	10
3-103	87-341-094-21	UT_1 + 3-6	4
3-104	87-500-169-11	VF + 4-6	4

Ref. No.	Part No.	Description	Q'ty
3-105	87-081-511-01	VTT + 3-6	24
3-106	87-081-018-01	FW4-8-0.5	1
3-107	87-391-713-11	N-2.6	2
3-108	87-450-413-01	LB-3	2

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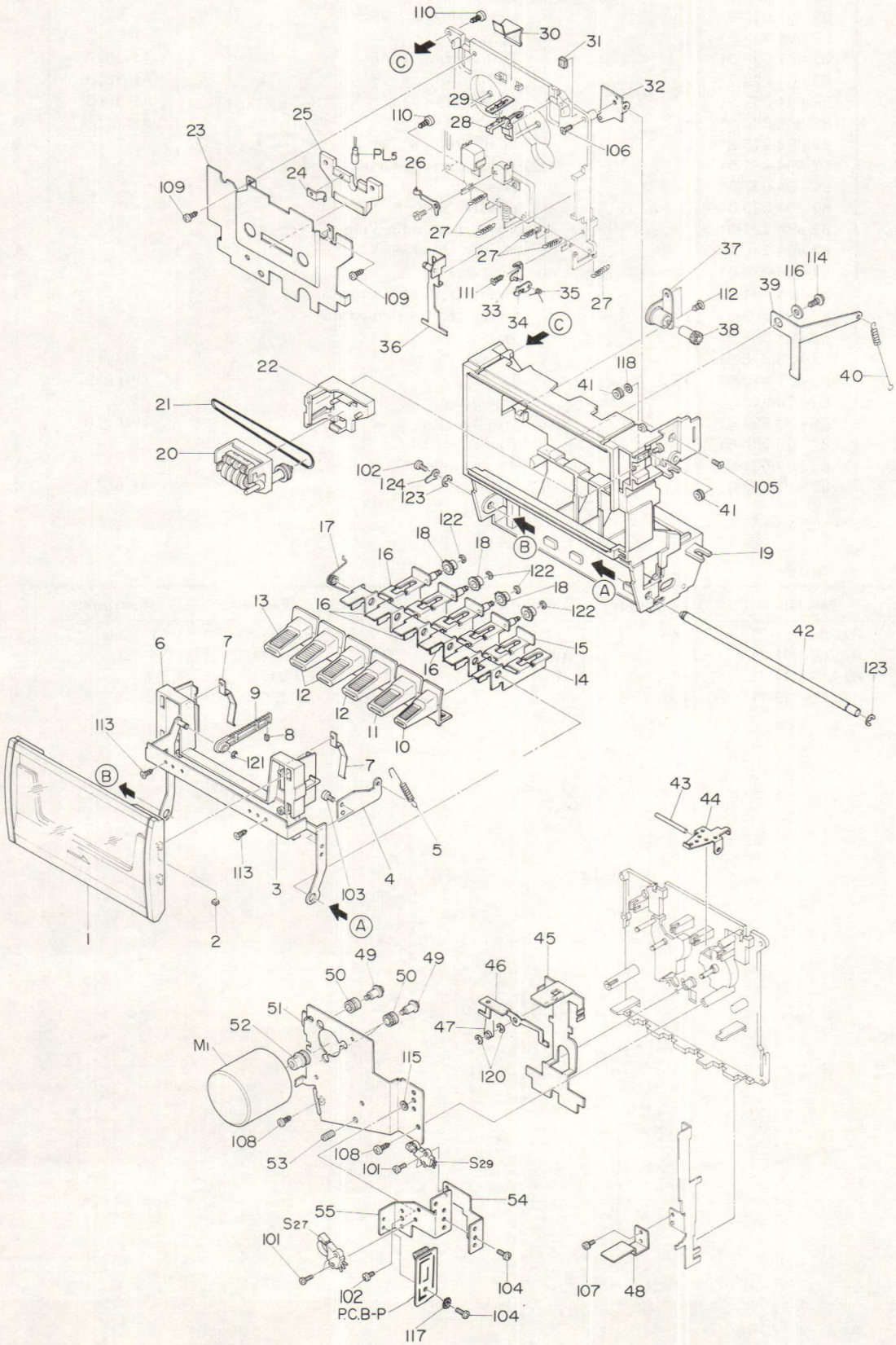
EXPLODED VIEW—4

As this is a PM-1 mechanism, the exploded view is omitted (see the supplement PM-1 mechanism adjustment manual). The exploded view bellow shows the additional mechanism of the PM-1. Also shown are the attachments of the motor and a list of such.



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Ref. No.	Part No.	Part No. Changed to	Description	Common Model	Q'ty
4-1	82-494-063-01		Cassette lid ass'y	*	1
4-2	82-494-316-01		Rubber sheet	*	2
4-3	82-494-240-01		Cassette box lever ass'y	*	1
4-4	82-494-282-01		Lever arm, Cassette box	*	1
4-5	82-494-283-01		Spring, Cassette-up	*	1
4-6	82-494-006-01		Cassette box	*	1
4-7	82-385-338-01		Pressure plate spring, Cassette	AD-6300	2
4-8	82-494-312-01		Spacer 2-2-2	*	1
4-9	82-541-240-01		Lever, Oil-damp	TPP-950	1
4-10	82-494-025-01		Push-key, PAUSE	*	1
4-11	82-494-023-01		Push-key, STOP	*	1
4-12	82-494-022-01		Push-key, FWD	*	3
4-13	82-494-024-01		Push-key, REC	*	1
4-14	82-494-286-01		Push-key lever C	*	1
4-15	82-494-248-01		Push-key lever B	*	1
4-16	82-494-254-01		Push-key lever A ass'y	*	4
4-17	82-494-249-01		T spring, Cassette case	*	1
4-18	82-470-224-01		Push gear	AF-3030	4
4-19	82-494-243-01		Mechanism holder	*	1
4-20	87-040-104-01		Counter		1
4-21	82-494-259-01		Belt, Counter	*	1
4-22	82-470-242-01		Holder, Counter	AF-3030	1
4-23	82-494-007-01		Decorative plate, Mechanism	*	1
4-24	82-385-283-01		Holder, Pilot lamp	AD-6300	1
4-25	82-385-010-01		Window, Tape indication	AD-6300	1
4-26	82-539-206-01		Earth plate, Erase head	TPR-905	1
4-27	82-494-267-01		E spring, Push button	*	5
4-28	82-439-261-01		REC blocking lever	TPR-905	1
4-29	82-439-262-01		Plate spring, REC blocking lever	TPR-905	1
4-30	82-494-296-01		Pressure plate spring, Cassette	*	1
4-31	82-494-294-01		Cushion A	*	1
4-32	82-494-236-01		Holder B	*	1
4-33	82-439-455-01		Holder, Lock plate ass'y	TPR-905	1
4-34	82-439-457-01		Lock plate	TPR-905	1
4-35	82-439-275-01		Spring, Lock plate	TPR-905	1
4-36	82-385-232-01		Lid lock lever ass'y	AD-6300	1
4-37	82-534-250-01		Metal fitting ass'y, Oil damp		1
4-38	82-534-264-01		Gear, Oil damp		1
4-39	82-494-246-01		REC lever B	*	1
4-40	82-494-295-01		E spring, REC	*	1
4-41	81-385-014-01		Roller	AD-6300	2
4-42	82-494-227-01		Shaft, Push-key	*	1
4-43	82-439-398-01		Shaft, CrO_2 selector plate spring	TPR-300	1
4-44	82-439-273-01		Plate spring, CrO_2 selector	TPR-300	1
4-45	82-494-314-01		Brake plate ass'y	*	1
4-46	82-439-271-01		Lever, CrO_2 selector	TPR-300	1
4-47	82-439-274-01		Spring, CrO_2 slector lever	TPR-300	1
4-48	82-494-245-01		REC plate spring A	*	1
4-49	87-081-483-01		Motor screw, M2.6		3
4-50	82-416-299-01		Rubber cushion	TPR-601	3
4-51	82-494-280-01		Holder, Motor	*	1
4-52	82-494-290-01		Motor pulley	*	1
4-53	82-385-311-01		Thrust screw	AD-6300	1
4-54	82-494-279-01		Holder, Micro	*	1
4-55	82-494-235-01		Holder A	*	1

Ref. No.	Part No.	Description	Q'ty
4-101	87-251-036-21	U + 2-8	4
4-102	87-251-071-21	U + 2.6-4	2
4-103	87-251-091-21	U + 3-3	1
4-104	87-251-094-21	U + 3-6	2
4-105	87-231-094-21	Q + 3-6	1
4-106	87-237-097-01	Q + 3-12 (Black)	1
4-107	87-480-071-01	VS + 2.6-4	1
4-108	87-341-074-21	UT_1 + 2.6-8	2
4-109	87-347-093-01	UT_1 + 3-5(Black)	2
4-110	87-341-096-21	UT_1 + 3-10	2
4-111	87-329-074-21	QT_1 + 2.6-8	1
4-112	87-329-095-21	QT_1 + 3-8	2

Ref. No.	Part No.	Description	Q'ty
4-113	87-327-096-01	QT_1 + 3-10 (Black)	2
4-114	87-510-095-01	VTF + 3-8	1
4-115	87-410-314-01	W3-8-0.3	1
4-116	87-410-233-01	W6-14-0.6	1
4-117	87-433-004-01	WTE-3	1
4-118	87-081-012-01	FW2.6-6-0.3	1
4-119	87-441-003-01	STE-1.5	1
4-120	87-441-006-01	STE-2.3	2
4-121	87-441-009-01	STE-3	1
4-122	87-441-010-01	STE-3.2	4
4-123	87-441-012-01	STE-5	2
4-124	87-450-413-01	LB-3	1

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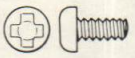
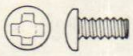
The following is the part number list of the ☆☆☆☆☆ marked parts of the PM-1 mechanism.

Ref. No.	Part No.	Description	Q'ty
1-13	82-385-332-11	Spring B, Head adjusting	1
1-31	87-046-127-01	Erase head	1
2-33	82-385-230-11	REC lever A	1
2-49	82-385-313-01	Main belt	1
2-50	82-385-307-01	Flywheel ass'y	1
2-51	82-385-314-21	Rubber belt	1
2-60	82-385-309-21	Worm gear B ass'y	1

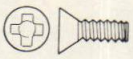
V: Pan head screw



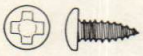
U: Binding head screw



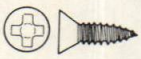
Q: Flat countersunk head screw



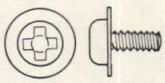
UT1: Binding head tapping screw



QT1: Flat countersunk head tapping screw



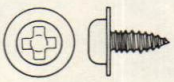
VF: Flange and Pan head screw



VTT: Pan head tap-tight screw

VS: Pan head screw with spring washer

VTF: Flange and Pan head tapping screw



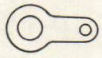
STE: E ring

WTE: Crown washer

W: Washer

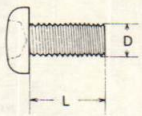
FW: Fiber washer

LB: Lug terminal plate



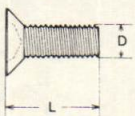
N: Nut

Example:



V + 3 – 6
- Length in mm
- Diameter in mm
- Type of Slot
- Type of Head

Example:



Q + 3 – 6
- Length in mm
- Diameter in mm
- Type of Slot
- Type of Head

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ELECTRICAL MAIN PARTS LIST

Symbol No.	Part No.	Description
≪TUNER CIRCUIT BOARD SECTION≫		
PCB-A	82-494-657-01	Tuner circuit board
IC1	82-494-791-01	IC, HA-11211
IC2	82-494-792-01	IC, μPC-1161C
IC3	87-027-327-01	IC, μPC-574J
IC4	87-027-348-01	IC, μPC-14312
Q1	87-026-165-01	FET, 3SK73 (GR)
Q2	89-305-352-01	Transistor, 2SC535 (B)
Q3	89-307-103-01	Transistor, 2SC710 (C)
Q4,10	89-319-233-01	Transistor, 2SC1923 (O)
Q5,6,7,8,9, 13,14,15, 20,22,23, 24,25,28	89-318-154-01	Transistor, 2SC1815 (Y)
Q11	89-303-813-01	Transistor, 2SC381 (O)
Q12,21	89-318-156-01	Transistor, 2SC1815 (BL)
Q16,17	89-318-155-01	Transistor, 2SC1815 (GR)
Q18,19	89-110-155-01	Transistor, 2SA1015 (GR)
Q27	89-110-154-01	Transistor, 2SA1015 (Y)
D1,2,3,4	87-027-325-01	Diode, 1SV55
D5	87-027-326-01	Diode, 1S2236
D6,7,9,10, 11,12,13, 14,15,16, 17,19	87-027-097-01	Diode, 1S1555
D8	88-052-188-01	Diode, 1S188 (FM)
D18	87-027-301-01	Zener diode, HZ3A1
L1,3	82-494-671-01	FM RF1 coil
L2,6	82-470-604-01	FM choke coil, 2.2μH
L4	82-494-672-01	FM RF2 coil
L5	82-494-673-01	FM OSC coil
L7	82-494-793-01	SW antenna coil
L8,10,11	82-494-785-01	MW, LW bar antenna coil
L12	82-494-784-01	SW OSC coil
L13	82-494-794-01	MW OSC coil
L14	82-494-795-01	LW OSC coil
L15,16,20	87-005-121-01	Coil, 2.2μH
L17	82-494-783-01	Coil (Quad-2)
L18	82-494-782-01	Coil (Quad-1)
L19	82-494-781-01	Coil, 18μH
VC1,2,VR1	82-494-624-01	VC, w/volume, 100kΩ-S
TC1,2,3	87-011-110-01	Trimmer, 5P
TC4	82-489-603-01	Trimmer
TC5,6,8,9	87-011-108-01	Trimmer, 8P
TC7,10	87-011-109-01	Trimmer, 15P
CF1	87-030-059-01	FM ceramic filter
CF2,3	87-030-047-01	FM ceramic filter
CFT1	82-494-786-01	AM ceramic filter transformer
LPF1,2	82-481-709-01	Low-pass filter
IFT1	82-494-674-01	FM IFT
IFT2	87-008-160-01	AM IFT (DET)
SFR1	87-021-563-01	Semi-fixed resistor, 500Ω-B
SFR2	87-021-406-01	Semi-fixed resistor, 4.7kΩ-B
SFR3	87-021-569-01	Semi-fixed resistor, 50kΩ-B
SFR4,5	87-021-567-01	Semi-fixed resistor, 10kΩ-B
S1	87-031-473-01	Remote switch (BAND SELECTOR)
S2,3,4	87-031-470-01	Push switch (AFC, MUTING, ST/MONO)
PIN-1	87-032-906-01	Pin, 6P
		< Resistors >
R131	87-029-081-01	4.7kΩ 1W Metal film
R132	87-025-218-01	33Ω 5W Nonflammable

Symbol No.	Part No.	Description
		< Capacitors >
C15	88-254-015-01	0.5pF Ceramic
C10	88-254-252-01	33pF Ceramic
C11	88-254-292-01	47pF Ceramic
C14	88-281-410-01	100pF Ceramic
C36	87-014-088-01	140pF PP
C34	87-014-046-01	360pF PP
C79	87-014-049-01	470pF PP
C89,90	87-014-059-01	1200pF PP
C31	87-014-067-01	2700pF PP
≪REC/PB CIRCUIT BOARD SECTION≫		
PCB-B	82-494-643-01	REC/PB circuit board
IC1,2	87-027-151-01	IC, NE545B
Q1,2,3,4	89-322-405-01	Transistor, 2SC2240 (GR)
Q5,6,7,8,9, 10,11,12, 13,14	89-318-155-01	Transistor, 2SC1815 (GR)
Q15	89-404-143-01	Transistor, 2SD414 (Q)
D1,2,5,6,7, 8,9,10	88-051-060-01	Diode, 1N60
D3	87-027-320-01	Zener diode, HZ-7C2
D11	87-027-097-01	Diode, 1S1555
D12	87-027-323-01	Zener diode, HZ22-2L
D13	87-027-163-01	Encapsulated diode, 1B4B1
L1,2	82-487-654-01	Coil, 10mH
L3,4	87-008-173-01	Bias trap coil
L5,6	82-371-648-01	Micro inductor coil, 6.8mH
L7	82-401-661-01	Choke coil, 600μH
OSC UNIT	82-494-625-01	Bias unit, 61kHz
VR17,18	82-494-623-01	Volume, 100kΩ-A (RECORD LEVEL)
S11	87-031-471-01	Lever switch (TAPE SELECTOR)
S12	82-481-660-01	Lever switch (DOLBY-NR)
S25	82-494-612-01	Slide switch (REC/PB)
F9	87-035-218-01	Fuse, "T" 400mA
	87-098-012-01	Fuse label, "T" 400mA
	87-033-147-01	Fuse clamp
SFR1,2,3,4, 5,6,7,8, 11,12	87-021-569-01	Semi-fixed resistor, 50kΩ-B
SFR9,10	87-021-570-01	Semi-fixed resistor, 100kΩ-B
PIN-4	87-032-904-01	Pin, 4P
PIN-3	87-032-905-01	Pin, 5P
PIN-2	87-032-906-01	Pin, 6P
		< Resistors >
R33,34	87-025-209-01	3.3kΩ 1/4W ±1% Metal film
R111	87-025-211-01	470Ω 1W Nonflammable
R118	87-025-213-01	1kΩ 1W Nonflammable
⚠R119	87-029-009-01	22Ω 1W Fuse resistor
⚠R117	87-029-023-01	47Ω 1/4W Fuse resistor
⚠R115	87-029-082-01	100Ω 1/4W Fuse resistor
		< Capacitors >
C19,20	87-015-282-01	0.22μF 50V Electrolytic LL
C3,4	87-015-408-01	10μF 25V Electrolytic LL
C112,115, 116,117 118	87-012-097-01	0.047μF Ceramic
C31,32,65,66	87-014-051-01	560pF PP
C25,26	82-371-641-01	0.027μF ±2% PP
C23,24	82-371-643-01	0.0047μF ±2% PP
C27,28	82-371-642-01	0.0056μF ±2% PP

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Symbol No.	Part No.	Description
≪AMP CIRCUIT BOARD SECTION≫		
PCB-C	82-494-640-01	AMP circuit board
IC1,2	87-027-289-01	IC, TA7136 (P)
Q1,2,7,8,9, 10	89-109-705-01	Transistor, 2SA970 (GR)
Q3,4,5,6,11,12	89-318-155-01	Transistor, 2SC1815 (GR)
Q13,14	89-322-294-01	Transistor, 2SC2229 (Y)
Q15,16,27	89-322-353-01	Transistor, 2SC2235 (O)
Q17,18	89-109-653-01	Transistor, 2SA965 (O)
Q19,20	89-407-163-01	Transistor, 2SD716 (O)
Q21,22	89-206-863-01	Transistor, 2SB686 (O)
Q23	89-316-273-01	Transistor, 2SC1627 (O)
Q24	89-108-173-01	Transistor, 2SA817 (O)
Q25,26	89-318-154-01	Transistor, 2SC1815 (Y)
D1	87-027-319-01	Encapsulated diode, M4C31
D2,3	87-027-347-01	Zener diode, HZ18-2L
D4	87-027-083-01	Diode, 1S1885
D5,6,7,8	87-027-097-01	Diode, 1S1555
RY1, S30	82-473-610-11	Relay
⚠F6	87-035-107-01	Fuse, "T" 315mA
⚠F7,8	87-035-119-01	Fuse, "T" 3.15A
	87-033-147-01	Fuse clamp
J7	82-494-635-01	Jack plate (AUX/EXT TAPE)
VR9,10	82-494-620-01	Volume, 100kΩ-B (VOLUME)
VR11,12	82-494-621-01	Volume, 50kΩ-MN (BALANCE)
VR13,14,15, 16	82-494-622-01	Volume, 50kΩ-B (TREBLE, BASS)
S5,6,7,8,9 10	82-494-605-01	Push switch (TUNER, AUX, MIC, PHONO CASSETTE, LOUDNESS)
SFR1,2	87-021-566-01	Semi-fixed resistor, 5kΩ-B
SFR3,4	87-021-564-01	Semi-fixed resistor, 1kΩ-B
		< Resistors >
R166	82-473-616-01	10Ω 1W Metal film
R81,82,83, 84	82-473-617-01	220Ω 1W Metal film
R91,92	87-025-055-01	270Ω 2W Metal film
R151,154	87-025-211-01	470Ω 1W Nonflammable
R85,86,87, 88	87-025-111-01	0.47Ω 3W Cement resistor
⚠R159,162	87-029-009-01	22Ω 1W Fuse resistor
⚠R157,160	87-029-023-01	47Ω 1/4W Fuse resistor
		< Capacitors >
C111,112	82-494-626-01	4700pF 50V Electrolytic
C1,2	87-015-282-01	0.22μF 50V Electrolytic LL
C117	82-473-619-01	100μF 25V Electrolytic BP
C15,16	87-015-380-01	4.7μF 25V Electrolytic BP
C113,114, 115,116	87-012-098-01	0.047μF 100V Ceramic
C107,108,122	87-012-097-01	0.047μF Ceramic
≪FM PRESET CIRCUIT BOARD SECTION≫		
PCB-D	82-494-660-01	FM PRESET circuit board
VR2,3,4,5, 6,7	82-494-619-01	Volume, 100kΩ-B (PRESET)
S15,16,17, 18,19,20, 21	82-494-614-01	Push switch (FM PRESET)
≪PEAK CIRCUIT BOARD SECTION≫		
PCB-E	82-494-646-01	Peak circuit board
IC1,2	87-027-261-01	IC, LB-1405
Q1,2,3,4,5	89-110-154-01	Transistor, 2SA1015 (Y)
SFR1	87-021-568-01	Semi-fixed resistor, 20kΩ-B

Symbol No.	Part No.	Description
≪POWER CIRCUIT BOARD-1 SECTION≫		
PCB-F	82-494-654-01	Power circuit board-1
Q1	89-404-143-01	Transistor, 2SD414 (Q)
D1	87-027-324-01	Diode, 1S1887
D2,3	87-027-083-01	Diode, 1S1885
D4	87-027-321-01	Zener diode, HZ9B2
⚠F3,4	87-035-060-01	Fuse, "T" 800mA
	87-098-015-01	Fuse lable, "T" 800mA
⚠F5	87-035-186-01	Fuse, "T" 125mA
	87-098-007-01	Fuse label, "T" 125mA
	87-033-147-01	Fuse clamp
		< Resistor >
R1	87-025-110-01	10kΩ 1W Metal film
		< Capacitors >
C1	87-015-406-01	100μF 100V Electrolytic
C4,6	87-012-097-01	0.047μF Ceramic
≪INDICATOR CIRCUIT BOARD SECTION≫		
PCB-G	82-494-658-01	Indicator circuit board
IC1	87-027-268-01	IC, SN16889 P
Q1	89-110-154-01	Transistor, 2SA1015 (Y)
D1~5, D9	82-494-778-01	Light emitting diode (FM FREQUENCY IND) (STEREO)
D6,8	82-494-780-01	Light emitting diode-L (TUNING IND)
D7	82-494-796-01	Light emitting diode-R (TUNING IND)
		< Resistor >
R3	87-029-079-01	100Ω 1W Metal film
≪POWER CIRCUIT BOARD-2 SECTION≫		
PCB-H	82-494-662-01	Power circuit board-2
Q1	89-404-143-01	Transistor, 2SD414 (Q)
D1	87-027-347-01	Zener diode, HZ18-2L
PIN-5	87-032-916-01	Pin, 6P
		< Resistors >
R1	87-025-217-01	560Ω 1W Metal film
R2	87-025-190-01	8.2kΩ 1W Metal film
		< Capacitor >
C1	87-012-097-01	0.047μF Ceramic
≪RELAY CIRCUIT BOARD-1 SECTION≫		
PCB-I	82-494-661-01	Relay circuit board-1
PIN-6	87-032-918-01	Pin, 8P
≪SPEAKERS SW CIRCUIT BOARD SECTION≫		
PCB-J	82-494-667-01	Speaker SW circuit board
CB1,2	82-488-636-01	Circuit braker, 2.5A
S13	82-494-666-01	Remote switch (SPEAKER)
≪SPEAKER CIRCUIT BOARD SECTION≫		
PCB-K	82-494-668-01	Speaker circuit board
J8,9	82-471-678-11	DIN speaker jack (SPEAKER-A)
	82-494-638-01	Speaker terminal (SPEAKER-B)
≪FUSE CIRCUIT BOARD SECTION≫		
⚠PCB-L	82-494-653-01	Fuse circuit board
⚠F1	87-035-060-01	Fuse, "T" 800mA
	87-098-015-01	Fuse label, "T" 800mA
⚠F2	87-035-068-01	Fuse, "T" 1.6A

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Symbol No.	Part No.	Description
	87-098-018-01	Fuse label, "T" 1.6A
	87-032-744-01	Fuse clamp
⚠S24	87-031-475-01	Rotary switch (VOLTAGE SELECTOR) (E model only)
⚠S24	87-031-476-01	Rotary switch (VOLTAGE SELECTOR) (K model only)
≪POWER SW CIRCUIT BOARD SECTION≫		
⚠PCB-M	82-494-652-01	Power SW circuit board
⚠S23	84-190-644-01	Push switch (POWER)
		< **Capacitor** >
⚠C1,2	84-190-622-01	0.1μF 250V Line capacitor
≪REC MUTE CIRCUIT BOARD SECTION≫		
PCB-N	82-494-645-01	REC MUTE circuit board
S14	87-031-469-01	Push switch (REC MUTE)
≪LED CIRCUIT BOARD-1 SECTION≫		
PCB-O	82-494-647-01	LED circuit board-1
D1	87-027-260-01	Light emitting diode (PEAK INDICATORS)
≪RELAY CIRCUIT BOARD-2 SECTION≫		
PCB-P	82-494-648-01	Relay circuit board-2
L1	82-401-624-01	Choke coil, 35μH
		< **Resistor** >
⚠R1	87-029-019-01	2.2Ω 1/2W Fuse resistor
≪METER CIRCUIT BOARD SECTION≫		
⚠PCB-Q	82-494-649-01	Meter circuit board
LM1,2	82-494-610-01	Level meter (LEFT, RIGHT)
≪OSC SW CIRCUIT BOARD SECTION≫		
PCB-R	82-494-644-01	OSC SW circuit board
S22	87-031-347-01	Slide switch (OSC)
≪LED CIRCUIT BOARD-2 SECTION≫		
PCB-S	82-494-650-01	LED circuit board-2
D1	87-026-164-01	Light emitting diode, TLG-124 (DOLBY-NR)
D2	87-027-262-01	Light emitting diode, TLR-124 (REC)

Symbol No.	Part No.	Description
≪LAMP CIRCUIT BOARD-1 SECTION≫		
PCB-T	82-494-655-01	Lamp circuit board-1
PL3,4	82-494-632-01	Pilot lamp (METER)
≪LAMP CIRCUIT BOARD-2 SECTION≫		
PCB-U	82-488-643-01	Lamp circuit board-2
PL1	82-494-630-01	Pilot lamp (DIAL PLATE)
	87-032-527-01	Pilot lamp clamp (DIAL PLATE)
≪ANT CIRCUIT BOARD SECTION≫		
PCB-V	82-494-659-01	ANT circuit board
T1	87-006-047-01	Balun transformer
J4	82-494-788-01	Socket (FM 75Ω)
J5	82-488-656-01	DIN antenna jack (FM 300Ω)
J6	82-488-655-01	DIN antenna jack (AM)
≪JACK CIRCUIT BOARD SECTION≫		
PCB-W	82-494-641-01	Jack circuit board
J1,2	87-032-672-01	MIC jack 6.3φ (MIC L,R)
≪MISECLLANEOUS≫		
⚠T2	82-494-615-01	Power transformer (E model only)
⚠T2	82-494-616-01	Power transformer (K model only)
⚠	87-034-877-01	AC power cord (E model only)
⚠	87-034-872-01	AC power cord (K model only)
RPH	87-046-130-01	REC/PB head
EH	87-046-127-01	Erase head
M1	87-045-114-01	Motor (TAPE MOTOR)
J3	87-032-673-01	Jack 6.3φ (PHONES)
S27	87-031-419-01	Micro switch (CrO_2 BIAS)
S28	87-031-393-01	Leaf switch (AUTO STOP)
S29	87-031-261-01	Micro switch (MOTOR)
PL2	82-494-633-01	Pilot lamp (DIAL POINTER)
PL5	82-494-631-01	Pilot lamp (CASSETTE CASE)
CON-4	82-494-676-01	Connector ass'y, 4P
CON-3	82-494-677-01	Connector ass'y, 5P
CON-2	82-494-678-01	Connector ass'y, 6P
CON-1	82-494-777-01	Connector ass'y, 6P
CON-5	82-494-680-01	Connector ass'y, 6P
CON-6	82-494-679-01	Connector ass'y, 8P

⚠ Safety component symbol

This symbol is given to important parts which serve to maintain the safety of the product, and which are made to conform to special safety specifications. Therefore, when replacing a component with this symbol, make absolutely sure that you use a designated part.

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ACCESSORIES/PACKAGE

Ref. No.	Part No.	Part No. Changed to	Description	Common Model	Q'ty
1	82-494-851-01		Printed indiv., Packing	*	1
2	82-494-852-01		Cushion, Printed indiv.	*	1
3	82-494-853-01		Cushion, Printed indiv.	*	1
4	82-494-855-01		Cushion, Auxiliary (for platter)	*	1
5	82-494-856-01		Cushion, Auxiliary (for dust cover)	*	1
6	84-184-860-01		Foamed mat		1
7	87-051-131-01		Poly-vinyl sack (for AC power cord)		1
8	87-051-132-01		Poly-vinyl sack		2
9	87-056-552-01		Poly-vinyl sack		1
10	87-056-564-01		Curl stopper		2
11	87-056-604-01		Poly-vinyl sack		1
12	82-471-868-01		Cushion D, Auxiliary	AF-5080	1
13	82-471-870-01		Sleeve	AF-5080	1
14	82-471-877-01		Lid, Auxiliary cushion D	AF-5080	1
15	80-291-652-01		Tape cassette, DMC-141		1
16	87-043-046-01		FM antenna E		1
17	87-043-047-01		SW lead antenna		1
18	87-058-023-01		Cord binder		1
19	87-058-024-01		Head cleaning pole ass'y		1
20a	82-494-901-01		Instructions booklet (E model only)	*	1
20b	82-494-902-01		Instructions booklet (K model only)	*	1
21	87-051-175-01		Poly-tube A		1
22	87-056-008-01		Label, AC power cord (K model only)		1
23	87-056-009-01		Distributors list		1
24	87-056-014-01		Tag, Main voltage (K model only)		1
25	87-057-672-01		Label, Caution		1

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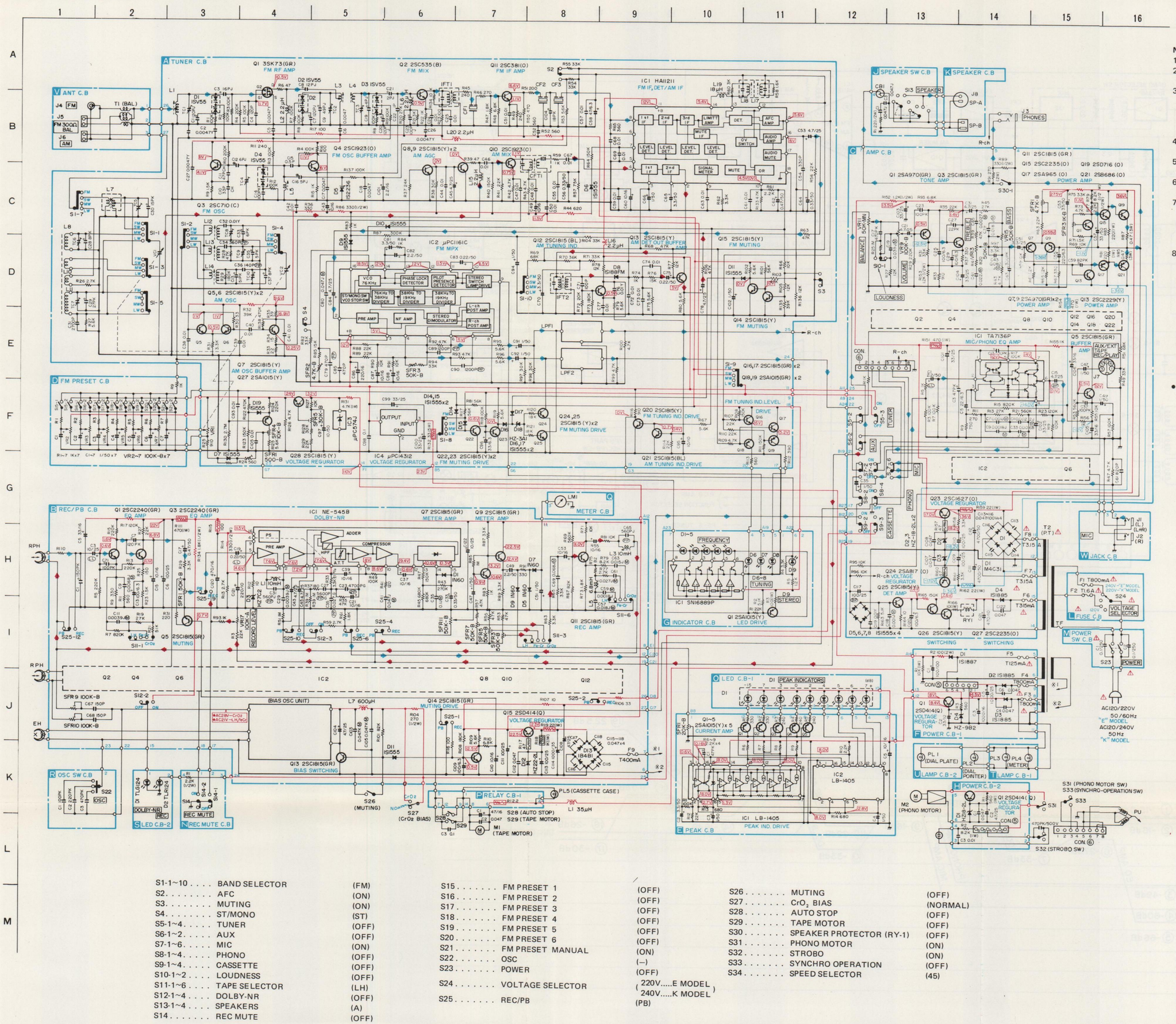
SCHEMATIC DIAGRAM



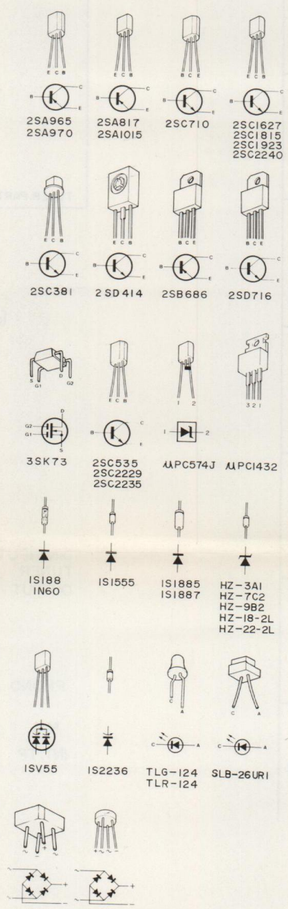
NOTES:

1) — B (+) power supply — B (—) power supply
2) ➡ Signal path
   ➡ Rec path, AM signal path.
3) The voltage is the reference value measured with a tester (20 k-ohms/V DC) when there are no signals.
   But ( ) is with AM reception or recording.
   An asterisk (*) indicates that the value was measured with a vacuum-tube voltmeter during recording.
4) Resistors with no designation have a rated power of ¼W and a tolerance of ±5%.
5) Capacitors with no designation have a dielectric strength of less than 50WV.
6) The only capacitor tolerances indicated are ±5% (J) and ±10% (K).
7) Ceramic capacitor symbols:
   For temperature compensation (SL)
   High dielectric constant system (YY)
   High dielectric constant system (YW, YP, YZ)
   For temperature compensation (SH)
8) Explanation of symbols
   (M) Mylar capacitor
   (PP) Polypropylene film capacitor
   (BP) Bi-polarized capacitor
   (LL) Low-leakage capacitor
   Fuse resistor
   Nonflammable resistor
   Safety component symbol

   This symbol is given to important parts which serve to maintain the safety of the product, and which are made to conform to special safety specifications. Therefore, when replacing a component with this symbol, make absolutely sure that you use a designated part.

- This schematic diagram is subject to change without notice in the interests of improved performance.

S1-1~10	BAND SELECTOR	(FM)
S2	AFC	(ON)
S3	MUTING	(ON)
S4	ST/MONO	(ST)
S5-1~4	TUNER	(OFF)
S6-1~2	AUX	(OFF)
S7-1~6	MIC	(ON)
S8-1~4	PHONO	(OFF)
S9-1~4	CASSETTE	(OFF)
S10-1~2	LOUDNESS	(OFF)
S11-1~6	TAPE SELECTOR	(LH)
S12-1~4	DOLBY-NR	(OFF)
S13-1~4	SPEAKERS	(A)
S14	REC MUTE	(OFF)
S15	FM PRESET 1	(OFF)
S16	FM PRESET 2	(OFF)
S17	FM PRESET 3	(OFF)
S18	FM PRESET 4	(OFF)
S19	FM PRESET 5	(OFF)
S20	FM PRESET 6	(OFF)
S21	FM PRESET MANUAL	(ON)
S22	OSC	(—)
S23	POWER	(OFF)
S24	VOLTAGE SELECTOR	(220V.....E MODEL / 240V.....K MODEL)
S25	REC/PB	(PB)
S26	MUTING	(OFF)
S27	CrO_2 BIAS	(NORMAL)
S28	AUTO STOP	(OFF)
S29	TAPE MOTOR	(OFF)
S30	SPEAKER PROTECTOR (RY-1)	(OFF)
S31	PHONO MOTOR	(ON)
S32	STROBO	(ON)
S33	SYNCHRO OPERATION	(OFF)
S34	SPEED SELECTOR	(45)



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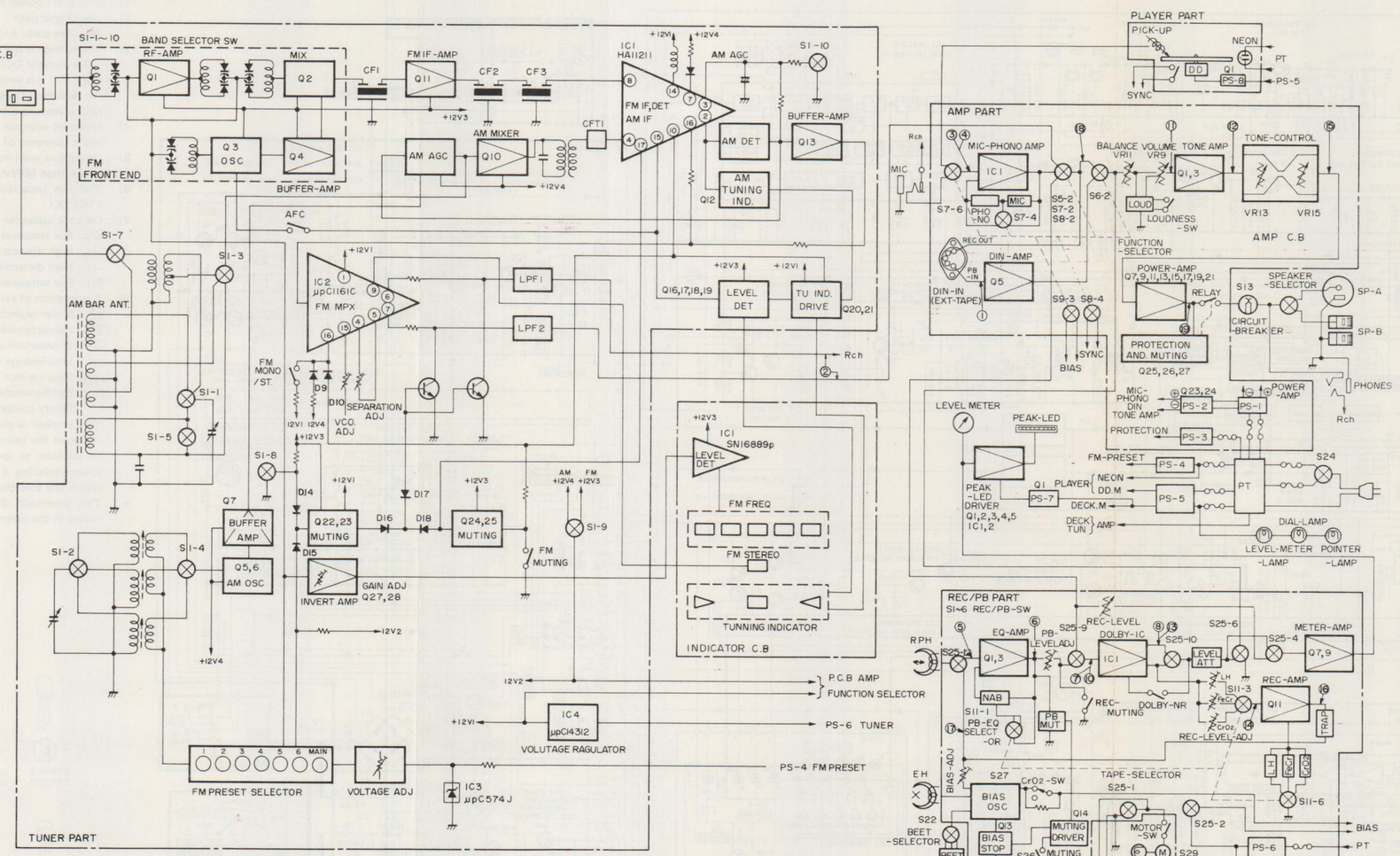
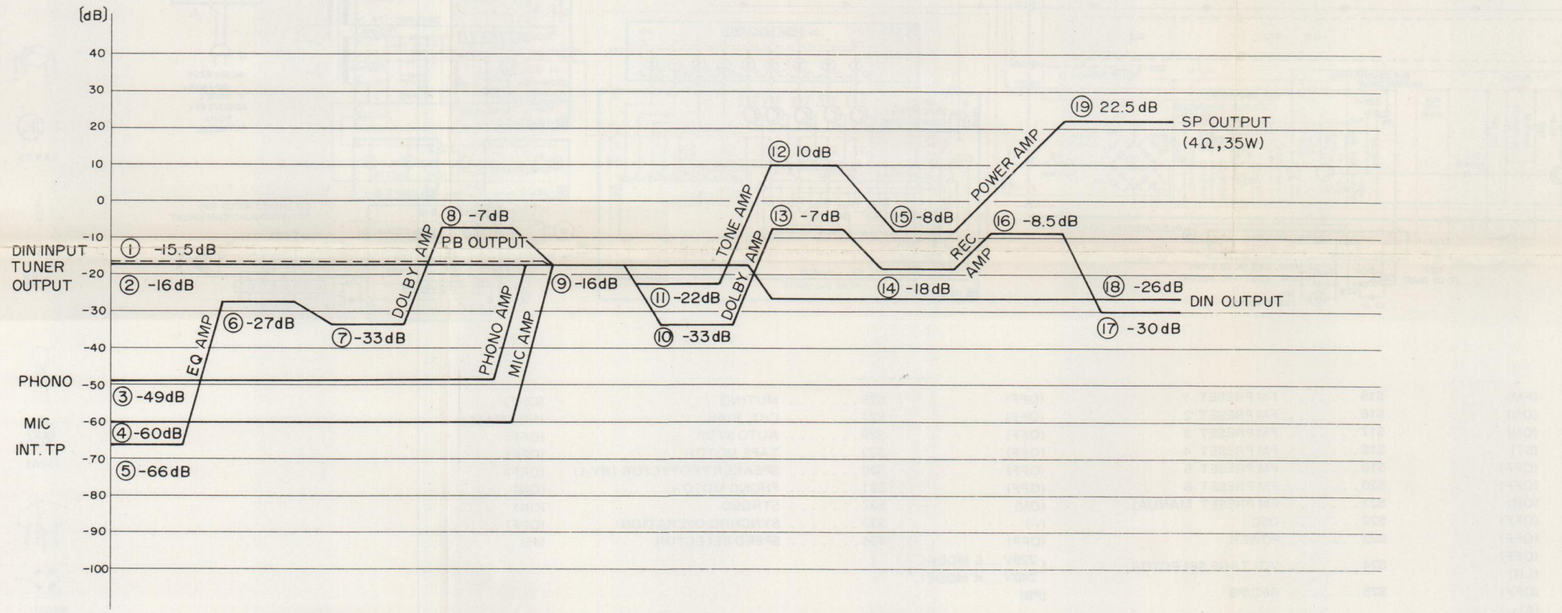
BLOCK DIAGRAM





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WIRING–1

BAR ANTENNA COIL

L8 (MW) L10 (EXT) L11 (LW)

LW tracking adj.
L11 ····· 150KHz
TC7 ····· 340KHz

MW tracking adj.
L8 ····· 600KHz
TC6 ····· 1400KHz

SW tracking adj.
L7 ····· 5.7MHz
TC5 ····· 16.7MHz

SW freq. range adj.
L12 ····· 5.7MHz
TC8 ····· 16.7MHz

MW freq. range adj.
L13 ····· 515KHz
TC9 ····· 1650KHz

LW freq. range adj.
L14 ····· 145KHz
TC10 ····· 350KHz

TP3 AM IF Input

Preset Voltage Adjustment
Settings:
- SELECTOR switch: FM
- Tuning dial: lower and upper detuned position.
- Adjustment location: SFR1, SFR5

Method:
Adjust SFR1 (upper) so that the voltage is 24.0V.
Adjust SFR5 (lower) so that the voltage is 2.6V.

TP2 FM IF Input

AM IF adj.
IFT2, CFT1 ··· 468KHz

FM 19 kHz Adjustment
Settings:
- SELECTOR switch: FM
- ST/MONO switch: ST
- Test point: TP8
- Adjustment location: SFR2

Method:
Adjust so that the frequency at the test point is 19 kHz.

FM IF adj.
IFT1, L17, L18 ····· 10.7MHz

How to change the lower limit of FM frequency range from 87.3 MHz to 87.5 MHz.

Symbol No.	Description	87.3 MHz		87.5 MHz	
R 24	Resistor	560 Ω	88-130-561-08	1.5 kΩ	88-130-152-08

How to change the upper limit of FM frequency range from 108.5 MHz to 104.0 MHz.

Symbol No.	Description	108.5 MHz		104.0 MHz	
R 127	Resistor	10 kΩ	88-130-103-08	75 kΩ	88-130-753-08

A TUNER C.B

82-494-656-01

82-494-657-01

C MAIN C.B

B REC/PB C.B

F POWER C.B-1

B REC/PB C.B

TP5 AM DET Output

TP4 FM DET Output

C MAIN C.B

V ANTENNA C.B

(COAXAL CABLE)

T1 (BALUN TRANS)

J4 FM (75Ω)

CHASSIS EARTH

J6 J5

AM

FM 300Ω (BAL)

ANTENNA

TP1 FM, SW RF Input

S2 AFC S3 MUTING S4 ST/MONO

FM tracking adj.
L1, L3, L4 ··· 87.3MHz(87.5MHz)
TC1, TC2, TC3 ··· 108.5MHz(108.0MHz)
( ) : West Germany model

FM freq. range adj.
L5 ····· 87.3MHz(87.5MHz)
TC4 ····· 108.5MHz(108.0MHz)
( ) : West Germany model

10. Frequency Indicator Adjustment
Settings:
- SELECTOR switch: FM
- Carrier frequency: 88 MHz
- Adjustment location: SFR4

Method:
Adjust SFR4 so that the frequency indicator of left hand (88 MHz) LED Light up.

TP8 19KHz Test Point

TP7 TUNER Output(R-ch)

TP6 TUNER Output(L-ch)

FM Separation Adjustment
Settings:
- SELECTOR switch: FM
- ST/MONO switch: ST
- Carrier frequency: 98 MHz
- Input signal: 60 dB
- Modulation frequency: 1 kHz
- Modulation degree: 75 kHz, pilot deg. 7.5 kHz
- Adjustment location: SFR3

Method:
Adjust so that the separation at the test points is at its maximum.

G INDICATOR C.B

TUNING INDICATOR

STEREO

90 96 101 105 107 (MHz)

FM FREQUENCY

NOTES (1) B(+) Pattern Others pattern (2) The voltage is the reference value measured with a tester (20K ohms/VDC) when there are no signals.

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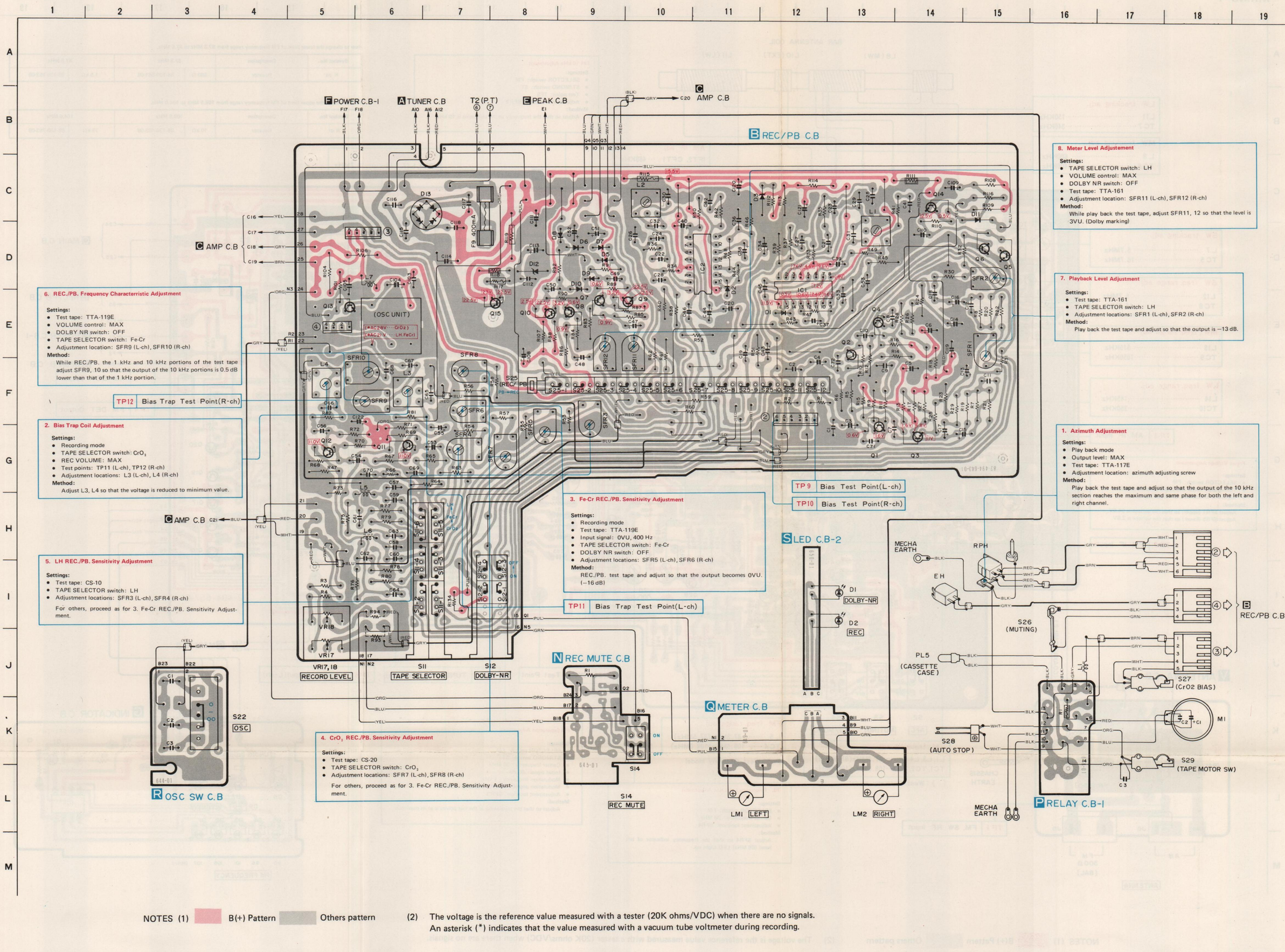
WIRING-2


F POWER C.B-I
A TUNER C.B
T2 (P.T)
E PEAK C.B
C AMP C.B
B REC/PB C.B
C AMP C.B
6. REC./PB. Frequency Characterristic Adjustment
Settings:
• Test tape: TTA-119E
• VOLUME control: MAX
• DOLBY NR switch: OFF
• TAPE SELECTOR switch: Fe-Cr
• Adjustment location: SFR9 (L-ch), SFR10 (R-ch)
Method:
While REC./PB. the 1 kHz and 10 kHz portions of the test tape adjust SFR9, 10 so that the output of the 10 kHz portions is 0.5 dB lower than that of the 1 kHz portion.
TP12 Bias Trap Test Point(R-ch)
2. Bias Trap Coil Adjustment
Settings:
• Recording mode
• TAPE SELECTOR switch: CrO2
• REC VOLUME: MAX
• Test points: TP11 (L-ch), TP12 (R-ch)
• Adjustment locations: L3 (L-ch), L4 (R-ch)
Method:
Adjust L3, L4 so that the voltage is reduced to minimum value.
C AMP C.B
5. LH REC./PB. Sensitivity Adjustment
Settings:
• Test tape: CS-10
• TAPE SELECTOR switch: LH
• Adjustment locations: SFR3 (L-ch), SFR4 (R-ch)
For others, proceed as for 3. Fe-Cr REC./PB. Sensitivity Adjustment.
VR17,18 RECORD LEVEL
S11 TAPE SELECTOR
S12 DOLBY-NR
3. Fe-Cr REC./PB. Sensitivity Adjustment
Settings:
• Recording mode
• Test tape: TTA-119E
• Input signal: 0VU, 400 Hz
• TAPE SELECTOR switch: Fe-Cr
• DOLBY NR switch: OFF
• Adjustment locations: SFR5 (L-ch), SFR6 (R-ch)
Method:
REC./PB. test tape and adjust so that the output becomes 0VU. (−16 dB)
TP11 Bias Trap Test Point(L-ch)
4. CrO2 REC./PB. Sensitivity Adjustment
Settings:
• Test tape: CS-20
• TAPE SELECTOR switch: CrO2
• Adjustment locations: SFR7 (L-ch), SFR8 (R-ch)
For others, proceed as for 3. Fe-Cr REC./PB. Sensitivity Adjustment.
N REC MUTE C.B
S14 REC MUTE
R OSC SW C.B
S22 OSC
TP9 Bias Test Point(L-ch)
TP10 Bias Test Point(R-ch)
S LED C.B-2
D1 DOLBY-NR
D2 REC
Q METER C.B
LM1 LEFT
LM2 RIGHT
8. Meter Level Adjustement
Settings:
• TAPE SELECTOR switch: LH
• VOLUME control: MAX
• DOLBY NR switch: OFF
• Test tape: TTA-161
• Adjustment location: SFR11 (L-ch), SFR12 (R-ch)
Method:
While play back the test tape, adjust SFR11, 12 so that the level is 3VU. (Dolby marking)
7. Playback Level Adjustment
Settings:
• Test tape: TTA-161
• TAPE SELECTOR switch: LH
• Adjustment locations: SFR1 (L-ch), SFR2 (R-ch)
Method:
Play back the test tape and adjust so that the output is −13 dB.
1. Azimuth Adjustment
Settings:
• Play back mode
• Output level: MAX
• Test tape: TTA-117E
• Adjustment location: azimuth adjusting screw
Method:
Play back the test tape and adjust so that the output of the 10 kHz section reaches the maximum and same phase for both the left and right channel.
MECHA EARTH
RPH
EH
S26 (MUTING)
PL5 (CASSETTE CASE)
S28 (AUTO STOP)
S27 (CrO2 BIAS)
S29 (TAPE MOTOR SW)
MI
P RELAY C.B-I
B REC/PB C.B

NOTES (1) B(+) Pattern Others pattern

(2) The voltage is the reference value measured with a tester (20K ohms/VDC) when there are no signals. An asterisk (*) indicates that the value measured with a vacuum tube voltmeter during recording.

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WIRING–3

1. Idling Current Adjustment

Settings:
- Test point: TP13 (L-ch), TP14 (R-ch)
- Adjustment location: SFR1 (L-ch), SFR2 (R-ch)

Method:
Connect a DC voltmeter across test points TP13, 14. Adjust SFR1, 2 so that the level is 20 mV.

2. Zero Potential (DC balance) Adjustment

Settings:
- Test point: TP15 (L-ch), TP16 (R-ch)
- Adjustment location: SFR3 (L-ch), SFR4 (R-ch)

Method:
Connect a DC voltmeter across test points TP15, 16. Adjust SFR3, 4 so that the level is 0.

9. 9 point LED Indicator Adjustment

Settings:
- Input signal: 0VU
- Adjustment location: SFR1

Method:
Adjust SFR1 so that the second orange LED Lights up slightly.

I RELAY C.B

J7 AUX/EXT TAPE REC/PLAY

J3 PHONES

C AMP C.B

TP14 Idling Current Test Point(R-ch)

TP13 Idling Current Test Point(L-ch)

K SPEAKER C.B

SPEAKER 4Ω~16Ω

S13 SPEAKERS

J SPEAKERS SW C.B

A TUNER C.B

CHASSIS EARTH

W JACK C.B

L(L+R)

MIC

R

S5 TUNER

S6 AUX

S7 MIC

S8 PHONO

S9 CASSETTE

S10 LOUDNESS

VR9,10 VOLUME

VR11,12 BALANCE

VR13,14 TREBLE

VR15,16 BASS

B REC/PB C.B

T2(P.T)

TP15 DC Balance Test Point(L-ch)

TP16 DC Balance Test Point(R-ch)

F POWER CB-I

E PEAK C.B

O LED C.B-I

PEAK INDICATOR

NOTES (1) B(+) Pattern B(+) Pattern Others pattern (2) The voltage is the reference value measured with a tester (20K ohms/VDC) when there are no signals.

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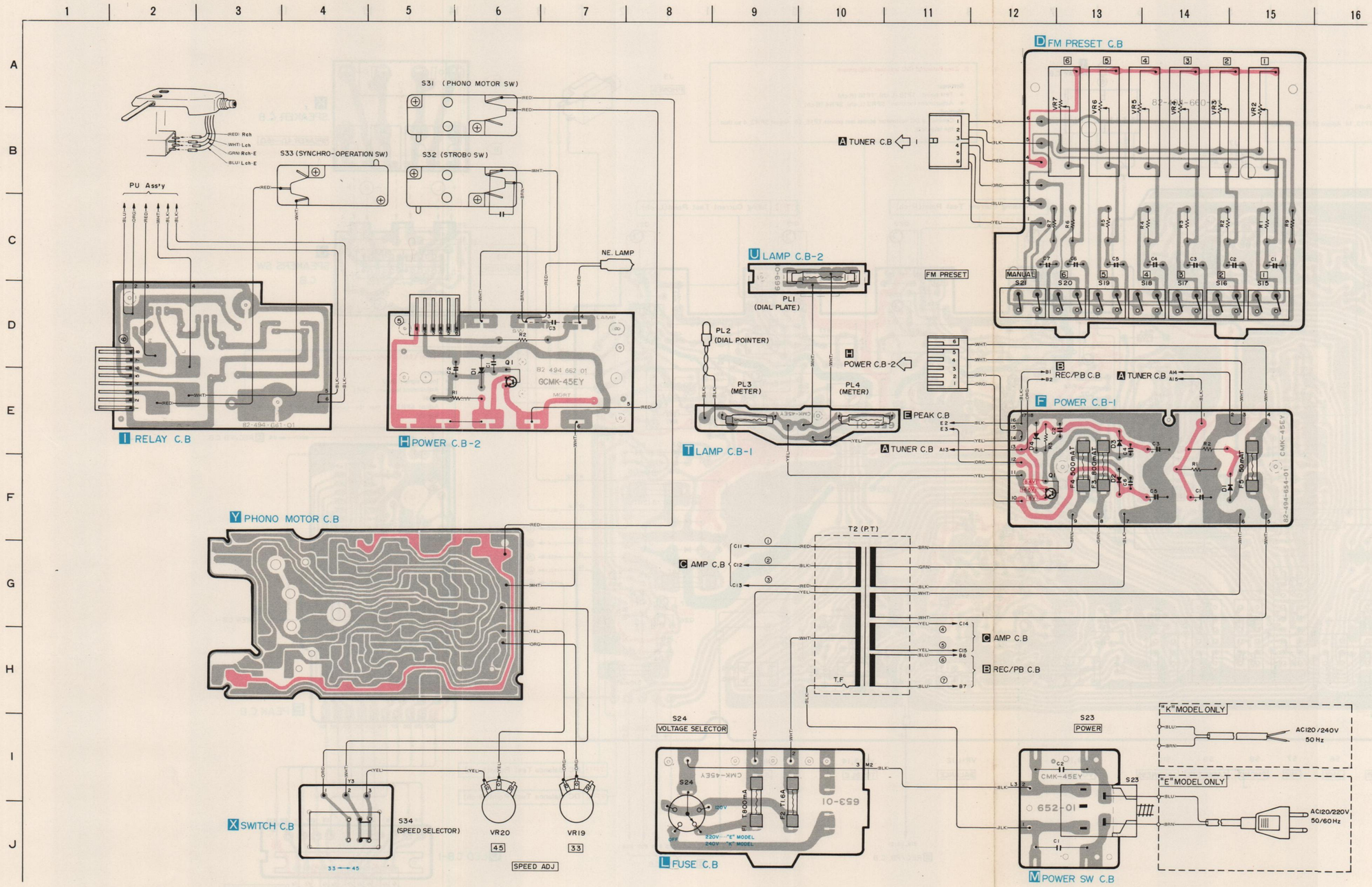
WIRING–4



NOTES (1) B(+) Pattern Others pattern (2) The voltage is the reference value measured with a tester (20K ohms/VDC) when there are no signals.